

Dr. Mona Hanna-Attisha responses to Flint Water Crisis Joint Committee questions

From Senator Stamas:

1. What circumstances factored into your decision to hold a press conference to announce your initial research into the flint water emergency?
 - It also did not seem likely that local and state authorities were going to take an action - everything was "in compliance." As a pediatrician who understands the consequences of lead exposure, I felt it was my professional and moral obligation to alert the public as soon as possible to the possibility of lead in the water. I was flanked at the press conference with the support of the greater medical community - Kirk Smith CEO of Greater Flint Health Coalition, Pete Levine Executive Director of Genesee County Medical Society, Dr Lawrence Reynolds CEO/President of Mott Children's Health Center, Jamie Gaskin CEO of United Way, Clarence Pierce of Hamilton Health Network and Mark Valacek from GCHD also joined the press conference.
2. How did the MDEQ initially react to your research findings? How did they attempt to address the discrepancy?
 - MDEQ, MDHHS and the gov's press offices all released statements disputed my findings.
 - Wurfel/MDEQ calls Hurley findings "unfortunate" and says water controversy is becoming "near-hysteria"; "Flint's drinking water is safe in that it's meeting federal and state standards"
 - MDHHS Director Nick Lyon e-mails staff in his department for help refuting VT/HMC blood lead level data. "I need an analysis of the Virginia Tech/Hurley data and their conclusions. I would like to make a strong statement with a demonstration of proof that the lead blood levels seen are not out of the ordinary and are attributable to seasonal fluctuations. GERALYN (Lasher) is working on this for me but she needs someone in public health who can work directly with her on immediate concerns/questions."
 - Governor's spokesperson called Hurley data "spliced and diced"
3. Did the MDEQ initially use Flint mailing addresses and not addresses of Flint residents? – Thereby diluting the sampling pool?
 - MDHHS, not MDEQ tracks children's blood lead levels. Even their raw data which was based on "city of flint" addresses revealed an increase in the % of kids with elevated lead levels after the water switch - this was pointed out by freep reporting (<http://www.freep.com/story/opinion/columnists/nancy-kaffer/2015/09/26/state-data-flint-lead/72820798/>). Using city of Flint, rather than geocoding to only those who get flint water, does dilute the effects; however, even that diluted data showed an increase.
4. How did you first learn that the MDEQ changed its original position and agreed with your analysis?
 - MDHHS Dr Eden Wells called me on Oct 2 prior to the Oct 2 press conference where they publicly announced that their data was consistent with my data.
5. How many lead poisoning cases have there been?
 - No one knows. Lead poisoning is diagnosed by checking blood lead levels. However, lead in the blood only lasts a short period of time – half life is 20-30 days. So when people knew there was a lead problem in the water (late sept, early oct) and could take precautions, testing did not necessarily reflect past lead exposure. In addition, our research and state data is based on lead screening at the recommended ages when children are developmentally most at risk for household lead exposure – ages of 1 and 2. However, lead in water disproportionately impacts a younger and more developmentally vulnerable population – in utero and babies on formula. This was not picked up because of the short half life. Thus, potentially all people who drank or cooked with this water until April 2014 until end date not set, were exposed. 100,000 people in city of Flint, 150,000 if you include those that come in for work, school, etc. And most vulnerable are kids under the age of 6 years, and per census there are about 8-10,000 kids under 6yr.

6. How much water would a child v an adult have to ingest to have a serious health problem, and how much does it affect adults?

- This is difficult to answer. Lead is a soluble metal. It can be ingested in two forms – as a particulate or dissolved in the water. So, ingestion can happen as a large chunk that chips off as scale – so that would give a large acute dose or ingestion can happen with daily chronic exposure. The smaller the person, the more readily the lead is absorbed and the greater impact it has. Recent research from Canada suggests that for every 1 ppb of lead in the water, it increases blood lead levels 35% after 150 days of exposure. However, every person will respond differently and it is largely impossible to attribute the impact of lead on the water to later effects. The studies on lead exposure and its impacts – specifically its impacts on cognition, behavior – are based on population level epidemiologic studies.

7. Beyond treating poisoning cases, what has the Hurley Center done in response to the crisis?

- Hurley Children's Hospital and Michigan State University launched the Pediatric Public Health Initiative in response to the crisis. Includes the ongoing assessment of the exposure (research), the long-term monitoring of the children, and the implementation and assessment of the interventions to mitigate the impact of the exposures. The aim is to become a model public health program, a center of excellence, to improve children's health outcomes.
- Hurley Children's Center sees the most Flint kids. Huge influx of children coming in for lead testing and doctor's appointments.
- Hurley Wellness and Population Health has continued to partner with community organizations in regards to improving nutrition access and education - weekly lead-focused cooking classes at the farmer's market, RD added to the clinic. Also added an lead information page on website.
- Hurley, through state funding, has increased the capacity of the Nurse Family Partnership program, an evidence-based maternal infant support program.
- Hurley clinical care has changed in all specialties - especially obstetrics, pediatrics, and geriatrics.
- Continued in-house precautions and water testing.

8. What are some of the secondary prevention steps that can be taken?

There are so many secondary prevention steps that can be taken to limit the impact of this exposure.

- Nutrition - in the short term, during recent and ongoing exposure, everyone needs healthy and frequent diets, especially diets rich in iron, calcium and vitamin C. This is a challenge in Flint with limited healthy food options. Need to increase enrollment in food assistance programs such as WIC, SNAP, double up food bucks, etc. Need long term nutrition access to limit future lead exposure - lead gets stored in bones and can last for decades, the only way to limit re-exposure is to always have great nutrition. Expand school meal options. Incentivize nutrition vendors and promote nutrition education. Breastfeeding promotion and education.
- Education - quality child care, universal preschool/headstart/greatstart, school health services, school behavioral health services, special education capacity, training for educators, etc.
- Health - access to medical homes - improved capacity and transportation, expanding early intervention services, case management, increased capacity of pediatric behavioral health
- Caregiver capacity - universal maternal-infant support services (nurse family partnership, healthy start, maternal infant health program), parenting programming.

9. Have you noticed any changes in Flint since the switch back to the Detroit water system?

- I am not sure what kind of changes you are referring to. Water infrastructure is still severely damaged, and water is still not safe.

10. What are people following the crisis in Flint missing out on when they just read the headlines?

- Not a short term problem
 - The more we invest now, the less we will pay later – early education vs special education
 - Cost of un-mitigated lead poisoning is tremendous (decreased lifetime earnings, special education, medical treatment, behavioral health, criminal justice, etc)
 - People of Flint are smart, strong and resilient. They are the heroes in this story, and have been vocal/fighting for almost two years; unfortunately and tragically, their concerns fell on deaf ears.
11. Looking back, is there anything you would have done differently in this situation?
- I wish I would have done something sooner. I apologize often to the people of Flint that the medical community did not hear their voices. There were concerns of color, odor, taste, bacteria, TTHMs, etc. I acted when I heard about lead, but I wish I had acted sooner.

From Representative Irwin

- 1) Does Hurley Medical Center track miscarriages or stillbirths? If so, were those increased following the water source switch?
- Not to my knowledge. However, in partnership with our colleagues in obstetrics, we are in the process of looking at all the maternal-fetal complications that may be related to the water switch - and that includes fetal deaths. We do not have any results to share yet.
- 2) Do you know if Hurley Medical Center has tested its air treatment and water fixtures for Legionella? If such testing has been carried out, what were the results? What measures is the Medical Center taking to prevent transmission of Legionella?
- I don't know what Hurley has done in regards to the testing or precautions for Legionella. That is under the purview of Hurley's facilities and infection control departments. I do believe that in response the legionella issue, they may have hired a third party consultant and enacted additional precautions.